

angles below the horizon on NVNG service viability, as well as the need for such angles to protect DOD METSAT users worldwide. As a preliminary proposal, we have included an elevation angle of zero degrees in Section 25.258(a). Further, in order to assure accuracy in the implementation of orbital propagator algorithms used to program NVNG satellites to prevent interference to DOD systems worldwide, we request interested parties to provide a description of their propagator algorithms they expect to use with their NVNG systems. We also ask interested parties to comment on the extent to which error in the propagator algorithms may affect protection to the DOD METSAT system. At this time we are not proposing specific language for a rule supporting a particular propagator algorithm, but notice is hereby given that a reference propagator algorithm may be specified if, based on the record, it appears that adequate protection to the DOD METSAT system cannot otherwise be achieved.

72. Each DoD satellite using the 400.15-401 MHz band will be assigned just one of two possible frequencies. It is our understanding that there will be occasions when those assignments will be changed. There may be operational or logistical circumstances which require DoD satellites to change from one frequency to the other on very short notice. As we understand it, DoD can change the frequency on which its satellites are operating and inform its earth stations worldwide of the new frequency choice in less than ninety minutes.

73. If DoD changes the frequency for a particular satellite, Little LEO systems must also be able to change its frequency to avoid interference to the DoD user. In order to accomplish this, a mechanism must be developed between DoD and the Little LEO operator to exchange ephemeris and frequency information. The Little LEO operator must be informed of the change in order to update system parameters expeditiously. Failure to update rapidly creates an increase in the risk of harmful interference to the worldwide operations of the DoD system. Therefore, Little LEO satellite operators must be capable of implementing DoD-imposed frequency changes within ninety minutes of the implementation of the change in frequencies of the DoD system.

74. We ask interested parties to provide information concerning the procedure by which information, frequency as well as ephemeris data, can be provided to Little LEO operators to facilitate timely deployment of revised protection areas, and the meaning of "timely" for purposes of avoiding harmful interference to the DoD earth stations when there is a DoD-prompted frequency change. As stated above, we believe DoD can, in less than ninety minutes, upload information to its satellite instructing the satellite to change the frequency on which it is operating, inform its earth stations of the frequency change, have its satellite begin transmitting on the new frequency, and its earth stations begin receiving signals transmitted on the new frequency. Our understanding is that a Little LEO system operating with one (or two) gateway stations in the United States, can implement such a frequency change in 14.4 hours or less. We do not believe a 14.4 hour implementation period is an acceptable time to avoid interference to the DoD system. Furthermore, a Little LEO system can reduce its implementation time by

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increasing the number of gateway stations in its system. Therefore, we propose that Little LEO systems be able to implement the change of frequency within ninety minutes of receiving the request from DoD.

75. Thus, we ask for comment including discussion of relevant technical and economic facts concerning what we should adopt as an appropriate time period to implement frequency changes to preclude any interference to DoD users. We ask Little LEO applicants whether it is technically and economically feasible for them to implement a frequency change procedure that is sufficiently responsive to avoid substantially increasing the risk of interference to DoD earth stations. We also ask Little LEOs to comment on the fastest possible time their systems will be able to implement a frequency change. We further ask interested Little LEO applicants to provide statistical estimates of the extent of interference to the DoD earth station as a function of the time between DoD system frequency change and responsive Little LEO system frequency change, and the costs in terms of system capacity and viability should they choose to program their Little LEO satellites to refrain from operating on any DoD frequency in DoD protection areas. Prior to the launch and operation of a licensed system, we propose to require that the Little LEO licensee successfully coordinate its system with DoD. We also propose to require that, at DoD's instruction, the Little LEO System-3 operator test, up to four times a year, its systems ability to implement a DoD-requested frequency change. This exercise would serve to ensure that the system operator can implement the frequency change and there are no equipment or system based problems in doing so. We also ask parties to comment on all aspects of the proposed rule and submit any additional proposals they find necessary.

76. Given the significant national security interests involved, we emphasize that Little LEO operations in the 400.15-401.0 MHz band must occur on an interference-free basis with the DoD satellites. The Commission will not hesitate to address problems of interference worldwide by requiring the licensee to terminate the interfering operations immediately and by imposing sanctions including monetary forfeitures and license revocations, when appropriate. Furthermore, we remind licensees that any transfer of a license includes the transfer of all conditions and limitations of the license.

77. We ask for comments on all aspects of our proposals for Little LEO System-1, 2, and 3.

#### 4. Use of WRC-95 and WRC- 97 Spectrum

78. At WRC-95, additional uplink spectrum was allocated for the Little LEO service.<sup>59</sup> As the Little LEO systems become operational and acquire additional customers, it may be advantageous for them to have access to additional spectrum. In addition, the availability of the WRC-95 spectrum may assist the Commission in satisfying the spectrum needs of the qualified second round Little LEO applicants. See 47 U.S.C. 309 (j)(6)(E). Thus, we seek comment on whether we should allow second round licensees exclusive use of the WRC-95 spectrum and whether they would be able to use the spectrum effectively, particularly since there is no available corresponding downlink spectrum. We also ask for comment on the overall public interest benefits of authorizing second round applicants to use the WRC-95 spectrum, rather than allowing others to apply for it. We note that the second round Little LEO applicants were instrumental in the United States' successful effort at WRC-95 to obtain additional spectrum for the Little LEO service. Moreover, it is settled that the Commission need not open each and every frequency for competing applications before assigning it.<sup>60</sup> Finally, given the high demand for Little LEO spectrum, we also request comment on whether any additional Little LEO spectrum secured at WRC-97 should be assigned to existing licensees or first be subject to a third round of applications.

#### C. Licensing Framework

79. As discussed, we tentatively conclude that we can issue Little LEO system licenses for each of the three discrete frequency segments to a qualified applicant. To maximize entry, we propose to limit each licensee to a system operating in only one of these segments. As described in more detail below, we will afford all applicants an opportunity to amend their applications to apply for any or all of these segments. If more than one applicant has applied for a system in a particular band segment, we propose to consider those applications mutually exclusive. In that case, we propose to conduct an auction for the segment. If the same applicant files for two or more segments, and these are the only applications filed for these segments, or if any applicant wins more than one segment in an auction, we will ask the applicant to choose in which segment it wishes to operate. The rejected segment will then be available for assignment to another second-round applicant, or, if no other second round applicant has applied for the segment, it will be deemed available to an applicant in a future processing group.

#### D. Resolving Mutual Exclusivity

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<sup>59</sup> At WRC-95 the 399.9-400.05 MHz uplink band was allocated for Little LEO use worldwide and the 455-456 MHz and 459-460 MHz uplink bands were allocated for use in region two.

<sup>60</sup> Rainbow Broadcasting Co v. FCC, 949 F.2d 405, 409-10 (D.C. Cir. 1991).

80. To the extent possible, we have tried and will continue to try to accommodate all those who seek to provide global Little LEO satellite service. As the analysis below suggests, auctions for transnational satellite services raise issues that are considerably more complex and difficult than issues raised by terrestrial applicants for the Little LEO service and there is no mutual exclusivity, we avoid the need to deal with these problematic issues. We recognize, however, that we may be faced with mutually exclusive applications. The use of competitive bidding to award licenses for global systems appears to raise a significant number of extremely difficult issues. If we auction licenses for service in this country, providers are likely to face a series of sequential auctions in different countries. Sequential auctions create significant uncertainty for potential service providers because providers are unsure that they will win auctions in all the countries in which they wish to provide service. This uncertainty may be so severe that, given the high fixed cost of a global system, it may deter entry, and impede the provision of service and the development of new offerings.

81. Furthermore, the United States is required by treaty to coordinate its satellite systems internationally with other terrestrial and satellite systems that may be affected by the new system's operations. Coordination negotiations generally begin once the U.S. system is licensed and are usually conducted on a country-by-country basis. A coordination agreement may contain a variety of operational constraints that are designed to ensure that all the systems can operate compatibly. The international coordination process becomes more extensive with a U.S.-licensed global satellite system, because its worldwide operations have the potential to affect every country operating radio systems in the frequency bands the U.S. system will use.

82. Nevertheless, we must recognize that it may become necessary to develop a means of choosing among mutually exclusive applicants. As long as spectrum is scarce, the Commission will be required to make difficult choices to serve the public interest. The Commission lacks authority to conduct lotteries for applications filed after July 26, 1993.<sup>61</sup> Comparative hearings have resulted in years of delay in licensing, without any assurance that the licenses ultimately end up in the hands of those that value them most highly. As a general rule, by contrast, auctions have proven to be a fast, fair, and efficient means of assigning spectrum licenses. Accordingly, we seek comment on whether, if we are faced with mutually exclusive applicants for Little LEO licenses, we should use auctions to decide amongst them. We specifically ask commenters to address the likelihood that other countries may use competitive bidding to award licenses.

1. Authority to Conduct Auctions

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<sup>61</sup> See 47 U.S.C. § 309(i).

83. In the event that there is mutual exclusivity among Little LEO applicants and if we were to decide that an auction was the best way to choose among the applicants, we note that Section 309(j) of the Communications Act allows us to employ auctions to choose among mutually exclusive applications for initial licenses or construction permits.<sup>62</sup> In order to employ auctions for a particular service, we must determine that "the principal use of [the] spectrum will involve, or is reasonably likely to involve, the licensee receiving compensation from subscribers."<sup>63</sup> In addition, the Commission also must find that the use of competitive bidding will promote certain statutory objectives.<sup>64</sup> These objectives are:

- (a) the development and rapid deployment of new technologies, products, and services for the benefit of the public, including those residing in rural areas, without administrative or judicial delays;
- (b) promoting economic opportunity and competition and ensuring that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women;
- (c) recovery for the public of a portion of the value of the public spectrum resource made available for commercial use and avoidance of unjust enrichment through the methods employed to award uses of that resource; and
- (d) efficient and intensive use of the electromagnetic spectrum.<sup>65</sup>

84. In the case of Little LEO systems, should there be more qualified applicants than spectrum segments, we believe that the condition precedent to auctions, mutual exclusivity, would exist. In the Second R&O, we stated that we will exclude from competitive bidding those classes of services where mutual exclusivity between applications cannot exist because channels must be "shared" by multiple licensees. We request comment on this. We note, however, our proposal that each Little LEO licensee time-share its spectrum segment with other licensees.<sup>66</sup>

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<sup>62</sup> 47 U.S.C. § 309(j)(1).

<sup>63</sup> 47 U.S.C. § 309(j)(2)(A).

<sup>64</sup> 47 U.S.C. § 309(j)(2)(B).

<sup>65</sup> 47 U.S.C. § 309(j)(3)(A)-(D).

<sup>66</sup> See infra ¶¶ 41-77.

85. We turn next to the question of whether the principal use of the spectrum is reasonably likely to involve the licensee receiving compensation from subscribers. Auctions are authorized if at least a majority of the use of the spectrum is likely to be for subscription-based services.<sup>67</sup> We look to classes of licenses and permits rather than to individual licenses.<sup>68</sup> Based on their applications, it appears that the Little LEO applicants contemplate providing subscription-based services. Although the statute requires that licensees receive compensation from subscribers in return for enabling those subscribers to receive and transmit communications signals, we do not believe that the statute requires a direct service arrangement between end users and space station licensees. The House Report states that "where the Commission determines that the principal use of the spectrum will be to, in essence, resell the spectrum to subscribers, and [where the objectives of Section 309(j)(3) are met], then the class of licenses should be subject to competitive bidding."<sup>69</sup> The statutory requirements may be satisfied where applicants choose to provide service to resellers rather than end users. The statute's legislative history indicates that it is irrelevant to the applicability of Section 309(j)(2) whether a licensee's subscribers are end users or resellers. Consequently, we tentatively conclude that the Little LEO service is likely to be primarily, if not entirely, a subscription-based service in the foreseeable future, and that the principal use requirement of Section 309(j)(2) is satisfied.

86. We also believe that using competitive bidding as a means of awarding licenses would advance the public interest objectives of Section 309(j)(3). The ability of the Little LEO service to provide global, two-way data communications and position location services, using low-cost, portable transceivers, should enhance communications capabilities, particularly in sparsely populated and remote locations. To the extent that an auction would allow us to license such systems more quickly than other licensing methods, we believe the public would be served.

87. Further, competitive bidding should encourage efficient use of the electromagnetic spectrum. An applicant would only bid for the minimum amount of spectrum needed, thereby encouraging spectrum efficiency. We seek comment on these conclusions.

88. If we were to decide to auction these licenses, we propose to auction licenses for three Little LEO systems in the following frequency bands:

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<sup>67</sup> Second R&O at ¶¶ 30-36.

<sup>68</sup> Id.

<sup>69</sup> H.R. Rep. No. 103-111, 103rd Congress, Second Session, at 253.

- (a) System-1: We propose to auction one Little LEO system license that will permit operations in the 149.81-149.9 MHz (uplink) and the 400.5050-400.5517 MHz (downlink) bands.
- (b) System-2: We also propose to auction one Little LEO system license that will permit operations in the 137-138 MHz band (downlink) and the 148.905-149.81 MHz band (uplink).
- (c) System-3: Further, we propose to auction one Little LEO system license that will permit operations in the 149.95-150.05 MHz band (uplink) and the 400.150-400.505 MHz and 400.645-401.000 MHz bands (downlink).

## 2. Competitive Bidding Design

89. In the event that licenses for the Little LEO service are subject to competitive bidding because mutual exclusivity cannot be avoided, we seek comment on whether we should conduct an auction. If so, we seek comment on whether we should employ a single round sealed bid auction (either sequential or simultaneous), a sequential oral auction, a simultaneous multiple round auction or some other methodology pursuant to the procedures set forth in Part 1, subpart Q of our rules relating to competitive bidding.<sup>70</sup> We also propose to retain our discretion to implement or modify certain procedures that will be announced by Public Notice prior to any auction in this proceeding, including rules governing the timing of application and payment requirements as well as any activity rules and stopping rules that may be appropriate. We seek comment on these proposals.

90. We intend to apply the general competitive bidding procedures found in Part 1, Subpart Q of our rules in the event that we conduct auctions. Under the rules established in the Second R&O, applicants are required to file a short-form application prior to the auction in which they wish to participate, in accordance with the Public Notice specifying a filing deadline for such applications.<sup>71</sup> The short-form application we propose to use for these auctions (FCC Form 175) appears in Appendix C. We request comment on this form as well as the applicability to the Little LEO service of the short-form application procedures set forth in Part 1, subpart Q of our rules. In addition, we seek comment on whether it would be more appropriate to employ electronic or manual filing of short-form applications, especially in light of the limited number of applicants.

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<sup>70</sup> 47 C.F.R. §1.2103.

<sup>71</sup> 47 C.F.R. § 1.2105.

91. *Upfront Payment.* We propose to require the submission of an upfront payment prior to any Little LEO auction. The Commission or the Wireless Telecommunications Bureau, on delegated authority, may establish the appropriate amount of such upfront payment. We seek comment on this proposal. Would it be appropriate, for example, to establish an upfront payment of five percent of the spectrum's estimated value? If commenters agree with this approach, they should discuss how the Commission or the Bureau should estimate the value of the spectrum to be auctioned.

92. *Payment for Licenses Awarded by Competitive Bidding.* To help ensure that auction winners are able to pay the full amount of their bids, we decided generally in the Second R&O that every winning bidder in an auction must tender a down payment sufficient to bring its total deposit up to 20 percent of its winning bid.<sup>72</sup> A down payment in the amount of 20 percent of the winning bid would help protect against possible default. We also concluded that full payment of the remainder of the winning bid should be paid in a lump sum.<sup>73</sup> We will follow similar procedures here and will set forth payment procedures in a future Public Notice.<sup>74</sup>

93. *Bid Withdrawal, Default and Disqualification.* We have previously explained that it is important not only to deter insincere or speculative bidding in auctions, but also to provide an incentive for bidders in multiple round auctions wishing to withdraw their bids to do so before bidding ceases. In the Second R&O, we observed that it is appropriate to create such an incentive because a withdrawal that occurs after an auction ends (default) is likely to be more harmful than one that occurs before closing.<sup>75</sup> We seek comment on using the bid withdrawal and default procedures in Part 1.

94. We will examine the winning bidder's application, including all petitions to deny the application, after the auction, to determine the bidder's qualifications to be a licensee. Since the "long-form" application referred to in our general auction rules will be filed before the auction, *i.e.*, when amended Little LEO applications are filed,<sup>76</sup> the usual post-auction "long-form" application submission is not necessary unless the winning applicant has substantially changed

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<sup>72</sup> Second R&O, at ¶¶ 189-190.

<sup>73</sup> We have made an exception to this rule for "designated entities," which, in the context of FCC auctions, refers to small businesses, rural telephone companies, and businesses owned by women and minorities. See id. at ¶ 227. See also 47 U.S.C. § 309(j)(4)(A).

<sup>74</sup> See, e.g., 47 C.F.R. § 1.2107.

<sup>75</sup> Second R&O at ¶¶ 154-155.

<sup>76</sup> See infra ¶¶ 103-106.



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its amended application. We propose that, if necessary, amended long-form applications must be filed within 10 days of the announcement of winning bidders.

95. After the auction, we will place the winning bidders' long form applications on public notice and entertain petitions to deny. If, pursuant to Section 309(d) of the Communications Act, the Commission dismisses or denies any and all petitions to deny, the Commission or the International Bureau acting for the Commission on delegated authority would issue a separate announcement to this effect, and the winning bidder would then have a prescribed amount of time to submit the balance of its winning bid as set forth in Part 1 of our rules. If the bidder did so, the license would be granted subject to any conditions that may be imposed. If the bidder failed to submit the balance of the winning bid or the license was otherwise denied, we would assess a default payment as discussed in Part 1. We request comment on these proposals.

### 3. Regulatory Safeguards

96. *Performance Requirements.* Congress has also directed that the Commission, in implementing auction procedures, "include performance requirements, such as appropriate deadlines and penalties for performance failures, to ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services."<sup>77</sup> We believe that existing performance requirements such as our construction and milestone requirements, in conjunction with the requirement that licensees pay for spectrum use, should be adequate to prevent the warehousing of spectrum and ensure fair competition and the prompt delivery of service.<sup>78</sup> We therefore tentatively conclude that it is unnecessary to adopt any further performance rules in connection with our proposed auction procedures. We seek comment on this tentative conclusion.

97. *Rules Prohibiting Collusion.* In the Second R&O, we adopted rules prohibiting collusive conduct in connection with competitive bidding, explaining that these rules, which are codified at 47 C.F.R. § 1.2105, would enhance the competitiveness of both the auction process and the structure of post-auction markets.<sup>79</sup> Under these rules, bidders are required to identify on their short-form applications any parties with whom they have entered into any consortium arrangements, joint ventures, partnerships or other agreements or understandings which relate in any way to the competitive bidding process. Bidders are also required to certify on their

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<sup>77</sup> 47 U.S.C. § 309(j)(4)(B).

<sup>78</sup> Little LEO Order at ¶ 18.

<sup>79</sup> Second R&O at ¶¶ 221-226.

short-form applications that they have not entered into any explicit or implicit agreements, arrangements or understandings of any kind with any parties, other than those identified, regarding the amount of their bid, bidding strategies or the particular properties on which they will or will not bid. We propose to apply these same rules to Little LEO auctions if such auctions are held.

98. In addition, consistent with other provisions of 47 C.F.R. § 1.2105, we propose to require winning bidders to submit a detailed explanation of the terms and conditions and parties involved in any bidding consortia, joint venture, partnership or other agreement or arrangement they have entered into relating to the competitive bidding process prior to the close of bidding. All such arrangements must have been entered into prior to the filing of short-form applications. In the DBS context, we concluded that after short-form applications are filed, and prior to the time the winning bidder has submitted its 20 percent down payment, all applicants should be prohibited from cooperating, collaborating, discussing or disclosing in any manner the substance of their bids or bidding strategies with other applicants for licenses serving the same or overlapping geographical area, unless such bidders are members of a bidding consortium or other joint bidding arrangement identified on the bidder's short-form application.<sup>80</sup> We seek comment on whether we should apply the same prohibition in any Little LEO auction we might hold. As we explained in the Second R&O, we believe that such requirements are not unduly burdensome and are appropriate to deter bidders from engaging in anticompetitive behavior. As we also noted in the Second R&O, allegations of collusion in a petition to deny may be investigated by the Commission or referred to the U.S. Department of Justice for investigation. Bidders who are found to have violated the antitrust laws or the Commission's Rules while participating in an auction may be subject to forfeiture of their down payment or their full bid amount, as well as revocation of their license, and may be prohibited from participating in future auctions.<sup>81</sup>

99. At the same time, we believe it would be appropriate to apply to the Little LEO service the exceptions to our collusion rules adopted subsequent to the Second R&O. Thus, we propose to allow applicants to (1) modify their short-form applications to reflect formation of consortia or changes in ownership at any time before or during an auction, provided that such changes do not result in a change in control of the applicant, and provided that the parties forming consortia or entering into ownership agreements have not applied for licenses for Little LEO systems that may be used to cover the same or overlapping geographical areas; and (2) make agreements to bid jointly for licenses after the filing of short-form applications, provided that the parties to the agreement have not applied for licenses that may be used to serve the same

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<sup>80</sup> DBS Order at ¶208.

<sup>81</sup> Id. at 2388.

or overlapping geographical areas. We further propose to allow a holder of a non-controlling attributable interest in an entity submitting a short-form application to acquire an ownership interest in, form a consortium with, or enter into a joint bidding arrangement with other applicants for licenses that may be used to serve the same or overlapping geographical areas after the filing of short-form applications, provided that (1) the attributable interest holder certifies to the Commission that it has not communicated and will not communicate with any party concerning the bids or bidding strategies of more than one of the applicants in which it holds an attributable interest, or with which it has a consortium or joint bidding arrangement, and which have applied for licenses that may be used to serve the same or overlapping geographical areas, and (2) the arrangements do not result in any change in control of an applicant.<sup>82</sup> We request comment on whether these proposed rules prohibiting collusive bidding arrangements are appropriately tailored for any Little LEO auctions we may hold.

100. *Designated Entities.* Section 309(j) of the Communications Act provides that, when promulgating competitive bidding regulations, the Commission must "ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services."<sup>83</sup> The Commission has employed several mechanisms to implement the statute's provisions concerning these "designated entities," including installment payments, bidding credits and spectrum set-asides, when establishing competitive bidding procedures for particular services.<sup>84</sup> We seek comment on what mechanisms, if any, the Commission should employ in implementing the provisions of Section 309(j).

#### E. Unauthorized and Interfering Transmissions

101. Little LEO earth terminals will have the physical capability to roam from one region or country to the next. Because of their inherent mobility, users may attempt to operate their earth terminals in a country in which the Little LEO licensee is not authorized to operate. This would not only violate that country's sovereign rights, but operation of the unauthorized earth terminal may cause interference to authorized users of the spectrum in that country. In order to protect against this, we ask for comment on effective methods of preventing unauthorized transmission and the cost related to each method. One method, for example, would require each Little LEO user terminal to be equipped with position determination capabilities that would

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<sup>82</sup> See Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, 9 F.C.C. Rcd 7684 (1994); 47 C.F.R. § 1.2105(c)(2)-(4).

<sup>83</sup> 47 U.S.C. § 309(j)(4)(D). See also 47 U.S.C. §§ 309(j)(3)(B) & (j)(4)(A).

<sup>84</sup> Second R&O, at ¶¶ 227-288. See also 47 C.F.R. § 1.2110.

prevent transmissions in countries from which they are not authorized to transmit. We specifically request comment on whether, and to what extent, the associated costs for each proposed method would impact the second round licensees ability to compete with existing licensees, who are not required to meet such a requirement. We request comment on how we should treat existing licensees.

F. Exclusive Arrangements

102. We ask for comment on whether we should adopt limitations on licensees' ability to enter into exclusive arrangements with other countries concerning communications to or from the United States.<sup>85</sup> An exclusive agreement may foreclose other Little LEO licensees from serving a foreign market, preventing that licensee from providing global service. Any limitations that we adopt on these types of arrangements would apply only to the handling of traffic to and from the United States. We recognize, however, that spectrum coordination and availability in a particular country may limit the number of systems that can serve that country.

G. Amended Applications

103. Amended applications must conform to Part 25 of our rules and include the technical and financial information required by Part 25 of our rules. Applicants must indicate in which spectrum block(s) they propose to operate, the technical parameters of their systems, time-sharing techniques with NOAA and DoD, and finances sufficient to launch and operate two satellites in their system for a year.

104. We require all applicants to provide technical information sufficient to demonstrate compatibility with existing authorized users. Potential coordination conflicts can thus be identified in the application process. Commenters should present, in technical detail, the operational protocols and descriptions of their proposed time-sharing techniques, including information about the methods they would use to avoid unacceptable interference to government and other systems in the sub-bands. We ask also that commenters describe in detail the strategies they propose to shift overall operation in the 137-138 MHz frequency band from the band-edge to the sub-bands during the years 2000 to 2005. Descriptions should include a detailed analysis of the impact such transition would have on the number of potential licensees and subscribers. Some licensees may choose to remain in the band-edge, based on their

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<sup>85</sup> Such limitations were adopted in the Big LEO service. See Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz frequency Band, Memorandum Opinion and Order, FCC 96-54, CC Docket No. 92-166, ¶¶ 54-55 (released February 15, 1996); 47 C.F.R. § 25.143(h) (prohibiting Big LEO satellite systems from entering into exclusive arrangements to serve particular countries).

assessment of the impact of government operation there. If, upon review, the Commission believes that it is feasible for the parties to coordinate successfully and a license is granted, we will expect the parties to coordinate their systems in good faith.

105. In order to expedite the licensing process and grant licenses as quickly as possible, applicants in the second processing round must submit their amended applications no later than December 16, 1996. If an applicant finds it necessary to preserve its right to operate in all three spectrum blocks, the applicant must file three separate applications. Applicants who submit only one application will not be allowed to amend their applications after the adoption of the Report and Order to include the frequencies not contained in its application.

106. Applicants will be allowed to further amend their applications once the Report and Order has been released only to the extent necessary because of new obligations that we have imposed differing from the proposals in this Notice. Aside from the changes outlined above, if an amendment is deemed "major," the entire application will be considered newly-filed as of the date of the amendment. The application will no longer be eligible for consideration in the processing round because of its failure to be properly filed as of the original cut-off date for accepting amended applications, December 16, 1996. We emphasize that only amendments necessary to conform the application to the final rules and policies adopted in the Report and Order will be accepted unconditionally. All other amendments will be treated under the existing procedural regulations.

#### H. Existing Rules

107. Second round Little LEO systems are subject to our existing rules and policies governing Little LEO system licensing and operation. We will not require Little LEO space station licensees to provide service on a common carrier basis.<sup>86</sup> Further, we will issue a blanket license for the space segment, a ten year operating license for the system that begins to run when the first LEO satellite is launched, authority to replace the older satellites in the system as they are retired, a filing window for next generation system proposals, and system implementation milestones.

### IV. CONCLUSION

108. In this Notice, we propose regulations that will allow the licensing and operation of competitive non-voice, non-geostationary mobile-satellite service systems operating in the public interest. Based on the considerations discussed above, we believe the proposals set forth in this Notice will best serve the public interest in competitive, efficient, rapid, and intense use of Little

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<sup>86</sup> Little LEO Order at ¶ 24.

LEO resources. We ask parties to comment on all aspects of the proposed service and auction rules and make any additional proposals necessary to serve the public interest and facilitate the efficient processing of second round applications.

## V. PROCEDURAL MATTERS

109. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis ("IRFA") of the expected impact on small entities of the proposals suggested in this document. The IRFA is set forth in Appendix A. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines as comments on the rest of the Notice, but they must have a separate and distinct heading designating them as responses to the Initial Regulatory Flexibility Analysis. The Secretary shall send a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603(a) of the Regulatory Flexibility Act, Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. § 601 et seq (1981).

110. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415 and 1.419, interested parties may file comments on or before November 29, 1996, and reply comments on or December 16, 1996. To file formally in this proceeding, you must file an original and four copies of all comments, reply comments, and supporting comments. If you want each Commissioner to receive a personal copy of your comments, you should file five additional copies. Send comments and reply comments to the Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the Federal Communications Commission, Reference Center, Room 239, 1919 M Street, N.W. Washington, D.C. 20554.

111. This Notice contains either a proposed or modified information collection. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget ("OMB") to comment on information collections contained in this Notice, as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Public and agency comments are due at the same time as other comments on this Notice; OMB comments are due 60 days from the date of publication of this Notice in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection

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techniques or other forms of information technology.

112. Written comments by the public on the proposed and/or modified information collections are due to the Commission on or before November 29, 1996. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Dorothy Conway, Federal Communications Commission, Room 234, 1919 M Street, N.W., Washington, DC 20554, or via the Internet to [dconway@fcc.gov](mailto:dconway@fcc.gov) and to Timothy Fain, OMB Desk Officer, 10236 NEOB, 725 - 17th Street, N.W., Washington, DC 20503 or via the Internet to [fain\\_t@al.eop.gov](mailto:fain_t@al.eop.gov). Written comments on the proposed and/or modified information collections must be submitted to the Office of Management and Budget (OMB) on or before 60 days after date of publication in the Federal Register.

113. This is a non-restricted notice and comment rulemaking proceeding.<sup>87</sup> *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in the Commission's rules. See generally 47 C.F.R. §§ 1.1202, 1.1203, and 1.1206(a). The Sunshine Agenda period is the period of time that commences with the release of public notice that a matter has been placed on the Sunshine Agenda and terminates when the Commission (1) releases the text of a decision or order in the matter; (2) issues a public notice stating that the matter has been deleted from the Sunshine Agenda; or (3) issues a public notice stating that the matter has been returned to the staff for further consideration, whichever occurs first. 47 C.F.R. § 1.1202(f). During the Sunshine Agenda period, no presentations, *ex parte* or otherwise, are permitted unless specifically exempted. 47 C.F.R. § 1.1203.

114. In general, an *ex parte* presentation is any communication directed to the merits or outcome of the proceeding made to decision-making personnel that (1) if written, is not served on the parties to the proceeding, or (2) if oral, is made without advance notice to the parties to the proceeding and without opportunity for them to be present. 47 C.F.R. § 1.1202(b). Any person who makes or submits a written *ex parte* presentation shall provide on the same day it is submitted, two copies of the same under separate cover to the Commission's Secretary for inclusion in the public record. The presentation (as well as any transmittal letter) must clearly indicate on its face the docket number of the particular proceeding and the fact that two copies of it have been submitted to the Secretary, and must be labeled or captioned as an *ex parte* presentation. 47 C.F.R. § 1.1206(a)(1).

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<sup>87</sup> Interested persons may make *ex parte* presentations concerning the issues in this rulemaking proceeding, subject to the rules for non-restricted proceedings described above. However, pending Little LEO applications are subject to the *ex parte* rules for restricted proceedings. See 47 C.F.R. 1.1208. Therefore, *ex parte* presentations concerning individual applications are prohibited.

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115. Any person who is making an oral *ex parte* presentation including data or arguments not already reflected in the person's written comments, memoranda, or other previous filings in that proceeding shall provide on the day of the oral presentation an original and one copy of a written memorandum to the Secretary (with a copy to the Commissioner or staff member involved) that summarizes the data and arguments. The memorandum (as well as any transmittal letter) must clearly indicate on its face the docket number of the particular proceeding and the fact that an original and one copy of it have been submitted to the Secretary, and must be labeled or captioned as an *ex parte* presentation, 47 C.F.R. § 1.1206(a)(2).

116. For further information concerning this rulemaking contact Paula Ford (202) 418-0760 or Brian Carter (202) 418-2119 of the International Bureau, Federal Communications Commission, Washington, D.C. 20554.

## VI. ORDERING CLAUSES

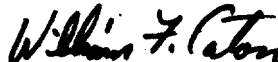
117. Accordingly, IT IS ORDERED that pursuant to the authority contained in Sections 1, 4(i), 4(j), 301, 303, 308, and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 154(j), 301, 303, 308, and 309(j), NOTICE IS HEREBY GIVEN of our intent to adopt the policies and rules set forth in this Notice and that COMMENT IS SOUGHT on all the proposals in this Notice.

118. IT IS FURTHER ORDERED that E-SAT, Inc.'s Petition for Rulemaking in Establishing Rules for Licensing Second-Round Applicants in the Non-voice, Non-geostationary Mobile Satellite Service dated February 14, 1996 and requesting that the Commission initiate a rulemaking proceeding to develop regulations for processing the second-round Little LEO applications IS GRANTED.



119. IT IS FURTHER ORDERED that the Secretary shall send a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603(a) of the Regulatory Flexibility Act, Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. §§ 601 et seq. (1981).

FEDERAL COMMUNICATIONS COMMISSION

  
William F. Caton  
Acting Secretary

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**APPENDIX A****Initial Regulatory Flexibility Analysis**

As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an initial Flexibility Analysis of the expected significant economic impact on small entities by the policies and rules proposed in this Fourth Notice of Proposed Rulemaking. Written public comments are requested on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on this Notice.

**A. Reason for Action**

This rulemaking proceeding is being initiated to obtain comment and develop a record on the proposed policies and modifications to the licensing and service rules for the second processing round for the Little LEO service. Specifically, this Notice proposes to limit eligibility in the second processing round to applicants who are not already Little LEO licensees or affiliated with Little LEO licensees. It also proposes particular technical requirements to maximize entry into the Little LEO market and seeks comment on whether we should conduct an auction if we do not have sufficient spectrum to accommodate all qualified applicants.

**B. Objectives**

The Commission seeks to amend the rules established for the Little LEO service, in order to ensure a more efficient and rapid development and implementation of Little LEO service, to promote effective competition, to prevent anticompetitive behavior, and to reflect developments in the service, technology, and spectrum use since the original rules were promulgated.

**C. Legal Basis**

The proposed action is authorized under the Administrative Procedure Act, 5 U.S.C. § 553; and Sections 1, 4(i), 4(j), 7, 301, 303, 308, and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 154(j), 157, 308, and 309(j).

**D. Description and Estimate of Small Entities Subject to the Rules**

The Commission has not developed a definition of small entities applicable to non-geostationary mobile satellite service licensees. Therefore the applicable definition of small entity is the definition under the Small Business Administration (SBA) rules applicable to Communications Services, Not Elsewhere Classified. This definition provides that a small entity

is one with \$11.0 million or less in annual receipts.<sup>88</sup> According to Census Bureau data, there are 848 firms that fall under the category of Communications Services, Not Elsewhere Classified. Of those, approximately 775 reported annual receipts of \$11 million or less and qualify as small entities.<sup>89</sup>

The proposed rules would apply to the existing applicants in the second processing round seeking authorization to provide Little LEO service under Part 25 of the Commission's rules. Of the eight applicants in the second processing round, two are small businesses, VITA and LEO One. Orbcomm, Starsys, GE Americom, CTA, Final Analysis, and E-Sat, are not small businesses since they each have revenues in excess of eleven million dollars annually or have parent companies or investors that have revenues in excess of \$11 million annually. We request comment on the description and the number of small entities that are significantly impacted by this proposal.

#### **E. Reporting, Recordkeeping, and Other Compliance Requirements**

The proposals under consideration in this Notice involve reporting requirements if an auction is necessary. The Notice proposes that applicants who participate in an auction provide certain information to identify themselves and their authorized representatives. These applicants would be required to comply with proposed requirements to file a report approved for use by applicants for other auctions conducted by the Commission (FCC Form 175), but this is not estimated to be a significant economic burden for these entities. In the event of an auction, applicants must comply with rules prohibiting collusion and providing for penalties for withdrawn bids that are not outbid and for failure to make timely downpayment. If adopted this proposal would apply to the existing eight applicants in the processing round and other future (if any) Little LEO applicants if there is mutually exclusivity. We note also, that this Notice requests comments on additional issues, such as financial qualifications, (see e.g. paragraphs 39-40) which, if adopted, may generate additional reporting or recordkeeping requirements.

#### **F. Any Significant Alternatives Considered**

This Notice solicits comment on other alternatives such as licensing more than three systems and using uplink spectrum allocated at WRC-95. Licensing more than three systems may further promote competition in this market. However, it may not be technically feasible to license more

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<sup>88</sup> 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4899.

<sup>89</sup> U.S. Bureau of the Census, U.S. Department of Commerce, 1992 Census of Transportation, Communications, and Utilities, UC92-S-1, Subject Series, Establishment and Firm Size, Table 2D, Employment Size of Firms: 1992, SIC Code 4899 (issued May 1995).

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than three systems. Allowing second round licensees to use WRC-95 spectrum may facilitate the operation of their systems. However, we are uncertain that the second round licensees would be able to use the spectrum effectively, particularly since there is no corresponding downlink.

In proposing to restrict the second round of Little LEO applications to new entrants, we believe we create competition and opportunity for businesses including small businesses. We seek comment on whether we should auction these licenses if there are mutually exclusive applications. We recognize that auctions by definition require bidders to raise funds for the license. While this may raise additional barriers for small businesses, we inquire into the appropriateness of bidding credits, installment payments, and other provisions to encourage participation by small businesses. We also ask about the appropriate financial qualification standard to encourage service and prevent warehousing. This standard should encourage new entrants including small businesses while deterring applicants who lack the capability to construct and launch a system.

**G. Federal Rules that Overlap, Duplicate or Conflict with These Proposed Requirements**

None.

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**APPENDIX B****Proposed Rule Amendments to 47 C.F.R. Part 25 of the Commission's Rules**

Part 25 of the Commission's Rules and Regulations (Chapter I of Title 47 of the Code of Federal Regulations) is proposed to be amended as follows:

1. The authority citation for Part 25 continues to read as follows:

**Authority:** Secs. 25.101 to 25.601 issued under Sec. 4, 48 Stat. 1066, as amended; 47 U.S.C. 154. Interpret or apply secs. 101-104, 76 Stat. 419-427; 47 U.S.C. 701-744; 47 U.S.C. 554.

**PART 25-SATELLITE COMMUNICATIONS**

2. The Table of Contents for Part 25 is amended by adding Sections 25.257 and 25.258 to Subpart C:

\* \* \* \* \*

**Subpart C -- Technical Standards**

\* \* \* \* \*

Sec.

25.257 Time Sharing Between NOAA Meteorological Satellites and NVNG Satellites in the 137-138 MHz band

25.258 Time Sharing Between DoD-NOAA Meteorological Satellites and NVNG Satellites in the 400.15-401 MHz band.

\* \* \* \* \*

3. Sections 25.257 and 25. 258 are added to Subpart C to read as follows:

**§ 25.257 Time Sharing Between NOAA Meteorological Satellites and NVNG Satellites in the 137-138 MHz band**

- (a) An NVNG licensee time-sharing spectrum in the 137-138 MHz band shall not transmit

signals into the "protection areas" of National Oceanic and Atmospheric Administration ("NOAA") satellites. The protection area shall be calculated by using ephemeris data and an earth station elevation angle of zero degrees towards the NOAA satellite. The NVNG licensee is responsible for obtaining the necessary ephemeris data. This information shall be updated system-wide on at least a biweekly basis.

(b) NVNG licensees shall establish a 24-hour per day contact person and telephone number so that claims of harmful interference into the NOAA earth stations and other issues can be reported and resolved expeditiously. This contact information shall be made available to NOAA.

(c) NVNG satellites shall be designed to cease transmissions automatically if, within a forty-eight hour period, a valid reset signal has not been received from the NVNG gateway Earth station. All NVNG satellites shall be capable of instantaneous shutdown on any sub-band upon command from the gateway earth station.

**§ 25.258 Time Sharing Between DoD-NOAA Meteorological Satellites and NVNG Satellites in the 400.15-401 MHz band.**

(a) An NVNG licensee time-sharing spectrum in the 400.15-401.0 MHz band shall not transmit signals into the "protection areas" of Department of Defense ("DoD")-National Oceanic and Atmospheric Administration ("NOAA") meteorological satellites. The protection area shall be calculated by using ephemeris data and an earth station elevation angle of zero degrees toward the DoD-NOAA meteorological satellite. The NVNG licensee is responsible for obtaining the necessary ephemeris data. This information shall be updated system-wide on at least a weekly basis.

(b) NVNG licensees shall establish a 24-hour per day contact person and telephone number so that claims of harmful interference into DoD-NOAA earth station users and other operational issues can be reported and resolved expeditiously. This contact information shall be made available to DoD-NOAA.

(c) NVNG satellites shall be designed to cease transmissions automatically if, within forty-eight hours, a valid reset signal has not been received from the NVNG gateway earth station. All NVNG satellites shall be capable of instantaneous shutdown on any sub-band upon command from the gateway earth station.

(d) Notwithstanding other provisions of this section, NVNG satellites sharing the 400.15-401 MHz with DoD-NOAA meteorological satellites shall implement within ninety minutes of receiving notice of a DoD-NOAA system frequency change, all appropriate modifications and

updates to operate on a non-interference basis in accordance with subsection (a), above.

(e) At DoD-NOAA's instruction, the Little LEO System-3 operator will test, up to four times a year, the Little LEO system's ability to implement a DoD-NOAA requested frequency change.

**APPENDIX C**

**Proposed Short Form Application  
FCC Form 175**



**Application to Participate in an FCC Auction**  
(Read Instructions on Back Before Completing)

Special Use	
FCC Use Only	

OMB Approval 3060-0600  
Expires 9/30/98  
Estimated Average Burden  
Per Response: 45 Minutes

1. Applicant			8. Applicant Classification: <input type="checkbox"/> Individual <input type="checkbox"/> Trust <input type="checkbox"/> Other		<input type="checkbox"/> Partnership <input type="checkbox"/> Corporation	
2. Mail Address (No P.O. Boxes)			9. Financial Eligibility (if applicable) <input type="checkbox"/> Gross revenues do not exceed the maximum dollar amount specified in the FCC rules governing the auctionable service. <input type="checkbox"/> Total Assets (if applicable) do not exceed maximum dollar amount specified in the FCC Rules governing the auctionable service.		10. Applicant Status: <input type="checkbox"/> Small Business % Bidding Credit Eligible Installment Payment Plan Type _____ <input type="checkbox"/> Rural telephone company <input type="checkbox"/> Minority owned business <input type="checkbox"/> Woman owned business <input type="checkbox"/> None of the above	
3. City	4. State	5. ZIP Code				
6. Auction Number		7. FCC Account Number				

11. Markets and Frequency Blocks /Channels for which you want to bid. If more than 5 markets, use supplemental form (FCC 175-S).

Market No.	Frequency Block/Channel No.
ALL <input type="checkbox"/>	Enter Frequency Block /Channel Number(s) or Letter(s) or Check All <input type="checkbox"/>
(a)	
(b)	
(c)	
(d)	
(e)	

- ☐ Check here if supplemental forms 175-S are attached. Indicate number of supplemental forms 175-S attached: \_\_\_\_\_
- ☐ Check here if exhibits are attached. Indicate number of supplemental exhibits attached: \_\_\_\_\_

12. Person(s) authorized to make or withdraw a bid (Typed/Printed Name)

(a)	(b)	(c)
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**Certification:** I certify the following:

- (1) that the applicant is legally, technically, financially and otherwise qualified pursuant to 308(b) of the Communications Act and the Commission's Rules and is in compliance with the foreign ownership provisions contained in Section 310 of the Communications Act.
- (2) that the applicant is the real party in interest in this application and that there are no agreements or understandings other than those specified in this application (see Instructions for certification), which provide that someone other than the applicant shall have an interest in the license.
- (3) that the applicant is aware that, if upon Commission inspection, this application is shown to be defective, the application may be dismissed without further consideration, and certain fees forfeited. Other penalties may also apply.
- (4) that the applicant has not entered into and will not enter into any explicit or implicit agreements or understandings of any kind with parties not identified in this application regarding the amount to be bid, bidding strategies or the particular license on which the applicant or other parties will or will not bid.
- (5) that the applicant, or any party to this application, is not subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988.
- (6) that, if financial eligibility block or applicant status is claimed in block 9 or 10, the applicant is eligible for any special provisions set forth in the Commission's Rules applicable to this auction and consents to audits, as set forth in the Commission's Rules, to verify such status.
- (7) that the applicant is and will, during the pendency of its application(s), remain in compliance with any service specific qualifications applicable to the licenses on which the applicant intends to bid including, but not limited to, financial qualifications.

I declare, under penalties of perjury, that I am an authorized representative of the above-named applicant for the license(s) specified above, that I have read the instructions and the foregoing certification and all matters and things stated in this application and attachments, including exhibits, are true and correct.

Typed/Printed Name of Person Certifying	Title of Person Certifying	Date
	Contact Person	Telephone No.
	E-mail address	FAX No.
Signature of Person Certifying (Blue Ink ONLY)		